INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

Univertical Corporation and Univertical Chemical Corporation 203 Weatherhead Street Angola, Indiana 46703

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F151-15240-00047	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 20, 2002 Expiration Date: June 20, 2007

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a copper, tin, and solder die casting and chemical reaction process plant.

Authorized individual:	David Whitehead, Vice President/General Manager
Source Address:	203 Weatherhead Street, Angola, Indiana 46703
Mailing Address:	203 Weatherhead Street, Angola, Indiana 46703
SIC Code:	3351 and 2819
Source Location Status:	Steuben
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) copper bar finishing line, with a maximum process rate of 3,000 pounds of copper bars per hour, including the following:

(1) One (1) Wheelabrator abrasive blasting machine (Shotblast), part of the copper bar finishing line, with a maximum process rate of 2,000 pounds of copper shot per hour, controlled by a baghouse, and exhausting through stack #DC-1.

(2) One natural gas-fired washing machine, identified as Washer #1, with a maximum capacity of 3,000 pounds per hour of copper bars and maximum heat input capacity of 0.6 MMBtu/hr, using a nontoxic alkaline soap, and exhausting through stack #BW-1;

(3) One (1) cold cut-off saw, identified as Saw #2, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation; and

(4) One (1) end drill and tap machine, identified as EDT, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation.

(b) One (1) copper anode process line, with a maximum capacity of 4,000 pounds of pure copper per hour, including the following:

(1) One (1) natural gas-fired shaft melter furnace, identified as Melter #1, with a maximum capacity of 4000 lbs/hr of pure copper and maximum heat input of 8 MMBtu/hr, and exhausting through stack #SM1.

(2) One (1) natural gas-fired tumbler, identified as Tumbler #1, with a maximum capacity of 4,000 lbs/hr of pure copper and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) electric induction reheat furnace (Reheat), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(4) One (1) electric induction holding furnace (Holder), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(5) One (1) three inch billet continuous casting machine (Caster), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(6) One (1) cold cut-off saw, identified as Saw #1, with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(7) One (1) continuous rolling machine (Roller), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(c) One (1) die casting process line, with a maximum capacity of 1,000 lbs/hr of pure tin or solder, containing the following equipment:

(1) One (1) natural gas-fired melting pot furnace (Tin Pot), with a maximum capacity of 500 lbs/hr of pure tin and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(2) One natural gas-fired melting pot furnace (Solder Pot), with a maximum capacity of 500 lbs/hr of pure solder and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) natural gas fired die casting machine, identified as DC #1, with a maximum capacity of 500 lbs/hr of pure solder or tin and maximum heat input of 0.475 MMBtu/hr, and exhausting to building ventilation.

(4) Two (2) natural gas-fired die casting machines, identified as DC #2 and DC #3, each with a maximum capacity of 500 lbs/hr of pure solder or tin and a maximum heat input of 0.2 MMBtu/hr, and exhausting to building ventilation.

(d) One (1) nickel sulfate dryer equipped with a cyclone, with a maximum input capacity of 3,050 lbs/hr of wet nickel sulfate crystal and a maximum heat input of 0.1 MMBtu/hr, using a scrubber as control, and exhausting through stack #10.

(e) One (1) sodium cyanide granulator, with a maximum capacity of 4,000 lbs/hr of sodium cyanide brick, using a water spray scrubber as control, and exhausting through stack #9.

(f) One (1) hydrochloric acid storage tank, identified as Tank 11, with a maximum capacity of 7,200 gallons and a maximum throughput rate of 160 lbs/hr or 67.3 gal/hr of hydrochloric acid, using an acid scrubber as control, and exhausting through stack/vent ID #11.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

(1) One (1) natural gas-fired boiler, identified as Boiler #1, constructed in 1946, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(2) One (1) natural gas-fired boiler, identified as Boiler #2, constructed in 1979, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(3) One (1) natural gas-fired boiler, identified as Boiler #3, constructed in 1999, with a maximum heat capacity of 1.1 MMBtu/hr, and exhausting through stack #8.

(b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons:

(1) One (1) diesel fuel storage tank, with a maximum capacity of 550 gallons and maximum annual throughput of 100 gallons, exhausting through a tank vent.

(2) One (1) gasoline storage tank, with a maximum capacity of 500 gallons and maximum annual throughput of 2000 gallons, exhausting through a tank vent.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(d) Other emission units, not regulated by a NESHAP, with PM_{10} and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) batch reaction tank, identified as Tank 111, producing nickel acetate at a maximum rate of 375 lbs/hr, and exhausting through stack/vent ID #1.

(2) One (1) batch reaction tank, identified as Tank 70, producing nickel sulfamate at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #2.

(3) One (1) batch reaction tank, identified as Tank 18, producing nickel bromide at a maximum rate of 1,800 lbs/hr, and exhausting through stack/vent ID #3.

(4) One (1) batch reaction tank, identified as Tank 4, producing cuprous chloride at a maximum rate of 7,000 lbs/hr, and exhausting through stack/vent ID #4.

(5) One (1) batch reaction tank, identified as Tank 14, producing cuprous cyanide at a maximum rate of 750 lbs/hr, and exhausting through stack/vent ID #5.

(6) One (1) batch reaction tank, identified as Tank 31, producing sodium zinc cyanide at a maximum rate of 5,000 lbs/hr, and exhausting through stack/vent ID #6.

(7) One (1) batch reaction tank, identified as Tank 7, producing sodium copper cyanide at a maximum rate of 16,500 lbs/hr, and exhausting through stack/vent ID #7.

(8) One (1) batch reaction tank, identified as Tank 12, producing sodium cyanide at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #12.

(9) One (1) batch reaction tank, identified as Tank 13, producing wet nickel sulfate crystal at a maximum rate of 700 lbs/hr, and exhausting through stack/vent ID #13.

(10) Twenty-seven (27) miscellaneous storage tanks, storing non-volatile, non-hazardous liquids and powders.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or,

for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; and

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Telephone No.: 1-800-753-5519 or
Telephone No.: 219-245-4870
Facsimile No.: 219-245-4877

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met::

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

(c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2, potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred and fifty (250) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a flow rate or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156

(b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(a) One (1) copper bar finishing line, with a maximum process rate of 3,000 pounds of copper bars per hour, including the following:

(1) One (1) Wheelabrator abrasive blasting machine (Shotblast), with a maximum process rate of 2,000 pounds of copper shot per hour, controlled by a baghouse, and exhausting through stack #DC-1.

(2) One natural gas-fired washing machine, identified as Washer #1, with a maximum capacity of 3,000 pounds per hour of copper bars and maximum heat input capacity of 0.6 MMBtu/hr, using a nontoxic alkaline soap, and exhausting through stack #BW-1;

(3) One (1) cold cut-off saw, identified as Saw #2, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation; and

(4) One (1) end drill and tap machine, identified as EDT, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation.

(b) One (1) copper anode process line, with a maximum capacity of 4,000 pounds of pure copper per hour, including the following:

(1) One (1) natural gas-fired shaft melter furnace, identified as Melter #1, with a maximum capacity of 4000 lbs/hr of pure copper and maximum heat input of 8 MMBtu/hr, and exhausting through stack #SM1.

(2) One (1) natural gas-fired tumbler, identified as Tumbler #1, with a maximum capacity of 4,000 lbs/hr of pure copper and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) electric induction reheat furnace (Reheat), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(4) One (1) electric induction holding furnace (Holder), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(5) One (1) three inch billet continuous casting machine (Caster), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(6) One (1) cold cut-off saw, identified as Saw #1, with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(7) One (1) continuous rolling machine (Roller), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

Facility Description [326 IAC 2-8-4(10)] (Continued):

(c) One (1) die casting process line, with a maximum capacity of 1,000 lbs/hr of pure tin or solder, containing the following equipment:

(1) One (1) natural gas-fired melting pot furnace (Tin Pot), with a maximum capacity of 500 lbs/hr of pure tin and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(2) One natural gas-fired melting pot furnace (Solder Pot), with a maximum capacity of 500 lbs/hr of pure solder and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) natural gas fired die casting machine, identified as DC #1, with a maximum capacity of 500 lbs/hr of pure solder or tin and maximum heat input of 0.475 MMBtu/hr, and exhausting to building ventilation.

(4) Two (2) natural gas-fired die casting machines, identified as DC #2 and DC #3, each with a maximum capacity of 500 lbs/hr of pure solder or tin and a maximum heat input of 0.2 MMBtu/hr, and exhausting to building ventilation.

(This information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 FESOP Limit [326 IAC 2-8]

(a) Pursuant to FESOP 151-7295-00047, issued on June 17, 1997, and 326 IAC 2-8, the PM10 emissions from the copper bar finishing line shall not exceed 5.38 pounds per hour. This limit is equivalent to 23.6 tons per year.

(b) Pursuant to FESOP 151-7295-00047, issued on June 17, 1997 and 326 IAC 2-8, the PM10 emissions from the copper anode process line shall not exceed 0.2 pounds per hour. This limit is equivalent to 0.88 tons per year.

(c) Pursuant to FESOP 151-7295-00047, issued on June 17, 1997 and 326 IAC 2-8, the PM10 emissions from the die casting process line shall not exceed 0.05 pounds per hour. This limit is equivalent to 0.22 tons per year.

In conjunction with Condition D.2.1(a), D.3.1(a), D.4.1(a), and combined with the PM10 emissions from boilers, this condition limits PM10 emissions from the entire source to less than one hundred (100) tons per year. Therefore, 326 IAC 2-7 is not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the copper bar finishing line, the copper node process line, and the die casting process line shall not exceed the pounds per hour limitations calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The equivalent PM limit for each process line is listed in the table below:

Process	Throughput Rate (lbs/hr)	Allowable PM Limit (lbs/hr)
Copper bar finishing line	3,000	5.38
Copper anode process line	4,000	6.52
Die casting process line	1,000	2.58

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

In order to comply with Conditions D.1.1(a) and D.1.2, the baghouse for PM control shall be in operation and control emissions from the abrasive blasting machine at all times that the blasting machine is in operation.

D.1.5 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Pursuant to FESOP 151-7295-00067, issued on June 17, 1997, and in order to demonstrate compliance with Conditions D.1.1(a) and D.1.2, the Permittee shall perform PM and PM10 testing for the blasting machine utilizing methods as approved by the Commissioner before September 16, 2004. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. PM10 includes filterable and condensible PM10. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the abrasive blasting machine, at least once per shift when the abrasive blasting machine is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.8 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the blasting machine when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.10 Record Keeping Requirements

(a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust.

(b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Once per shift records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle operation.

(2) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(d) One (1) nickel sulfate dryer equipped with a cyclone, with a maximum input capacity of 3,050 lbs/hr of wet nickel sulfate crystal and a maximum heat input of 0.1 MMBtu/hr, using a scrubber as control, and exhausting through stack #10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 FESOP Limit [326 IAC 2-8]

Pursuant to FESOP 151-7295-00047, issued on June 17, 1997 and 326 IAC 2-8:

(a) The PM10 emissions from the nickel sulfate dryer shall not exceed 2.05 pounds per hour. This limit is equivalent to 9.0 tons per year. In conjunction with Conditions D.1.1, D.3.1(a), D.4.1(a), and combined with the PM10 emissions from the boilers, this condition limits PM10 emissions from the entire source to less than one hundred (100) tons per year.

(b) The nickel sulfate emissions from this dryer shall not exceed 2.05 pounds per hour. This limit is equivalent to 9.0 tons per year of nickel sulfate emissions. In conjunction with Conditions D.3.1(b) and D.4.1(b), this condition limits any single HAP from the entire source to less than ten (10) tons per year and any combination of HAPs from the entire source to less than twenty-five (25) tons per year.

Therefore, 326 IAC 2-7 is not applicable.

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the nickel sulfate dryer shall not exceed 5.44 pounds per hour when operating at a process weight rate of 3,050 pounds per hour. Compliance with Condition D.2.1(b) ensures compliance with this limit.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.2.4 Particulate Matter (PM)

In order to comply with Conditions D.2.1 and D.2.2, the cyclone and the scrubber shall be in operation at all times that the dryer is in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

(a) Visible emission notations of the scrubber stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.6 Parametric Monitoring

The Permittee shall monitor and record the pressure drop, flow rate, and the acid content of the scrubbers, at least once per shift when the associated nickel sulfate dryer are in operation when venting to the atmosphere. When for any one reading, the pressure drop across any of the scrubbers is outside the normal range of 0.5 and 2.0 inches of water, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the flow rate of any of the scrubbers is less than the normal minimum of 5 .0 gallons per minute, or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. When for any one reading, the acid content of any of the scrubbers is above the normal maximum pH level of 7.0, or an acid content established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports. A pressure reading that is outside the above mention range, a flow rate that is below the above mentioned minimum, or an acid content above the above mentioned maximum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

The instruments used for determining the pressure, flow rate, and pH level shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Scrubber Inspections

An inspection shall be performed each calendar quarter of the scrubber controlling the nickel sulfate dryer when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.2.8 Failure Detection

In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain records of visible emission notations of the nickel sulfate dryer stack exhaust.

(b) To document compliance with Condition D.2.6, the Permittee shall maintain records of the following operational parameters for each scrubber once per shift during normal operation:

(1) pressure drop;

(2) flow rate; and

(3) acid content (pH level).

(c) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(e) One (1) sodium cyanide granulator, with a maximum capacity of 4,000 lbs/hr of sodium cyanide brick, using a water spray scrubber as control, and exhausting through stack #9.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 FESOP Limit [326 IAC 2-8]

Pursuant to FESOP 151-7295-00047, issued on June 17, 1997 and 326 IAC 2-8:

(a) The PM10 emissions from the sodium cyanide granulator shall not exceed 0.4 pounds per hour. This limit is equivalent to 1.7 tons per year of PM10 emissions. In conjunction with Conditions D.1.1, D.2.1(a), D.4.1(a), and combined with the PM10 emissions from the boilers, this condition limits PM10 emissions from the entire source to less than one hundred (100) tons per year.

(b) The sodium cyanide emissions from this granulator shall not exceed 0.4 pounds per hour. This limit is equivalent to 1.7 tons per year of the sodium cyanide emissions, which equals to the potential sodium cyanide emissions from this granulator before controls. In conjunction with Conditions, D.2.1(b), D.4.1(b), this condition limits any single HAP from the entire source to less than ten (10) tons per year and any combination of HAPs from the entire source to less than twenty-five (25) tons per year.

Therefore, 326 IAC 2-7 does not apply.

D.3.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the sodium cyanide granulator shall not exceed 6.52 pounds per hour when operating at a process weight rate of 4,000 pounds per hour. Compliance with Condition D.3.1(b) ensures compliance with this limit.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(f) One (1) hydrochloric acid storage tank, identified as Tank 11, with a maximum capacity of 7,200 gallons and a maximum hydrochloric acid throughput rate of 160 lbs/hr or 67.3 gal/hr, using an acid scrubber as control, and exhausting through stack/vent ID #11.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.1 FESOP Limit [326 IAC 2-8]

(a) Pursuant to 326 IAC 2-8, the PM10 emissions from the hydrochloric acid storage tank shall not exceed 0.33 pounds per hour. This limit is equivalent to 1.42 tons per year, which is equal to the potential PM10 emissions from this tank before controls. In conjunction with Conditions D.1.1, D.2.1(a), D.3.1(a), and combined with the PM10 emissions from the boilers, this condition limits PM10 emissions from the entire source to less than one hundred (100) tons per year.

(b) Pursuant to 326 IAC 2-8, the annual throughput rate of the hydrochloric acid storage tank is less than 590,000 gallons per year. This is equivalent to 1.42 tons of hydrochloric acid emissions per year, which are equal to the potential hydrochloric acid emissions from this tank before controls. In conjunction with Conditions, D.2.1(b), D.3.1(b), this condition limits any single HAP from the entire source to less than ten (10) tons per year and any combination of HAPs from the entire source to less than twenty-five (25) tons per year.

Therefore, 326 IAC 2-7 does not apply.

D.4.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(c) (Process Operations), the allowable PM emission rate from the hydrochloric acid storage tank shall not exceed 0.75 pounds per hour when operating at a process weight rate of 160 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.4.3 Record Keeping Requirements

(a) To document compliance with Condition D.4.1(b), the Permittee shall maintain records of the annual hydrochloric acid throughput rate of this tank.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

(1) One (1) natural gas-fired boiler, identified as Boiler #1, constructed in 1946, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(2) One (1) natural gas-fired boiler, identified as Boiler #2, constructed in 1979, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(3) One (1) natural gas-fired boiler, identified as Boiler #3, constructed in 1999, with a maximum heat capacity of 1.1 MMBtu/hr, and exhausting through stack #8.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(d), particulate emissions from Boiler #1, which began operation before June 8, 1972, shall in no case exceed 0.8 pounds of particulate matter per million British thermal units heat input.

D.5.2 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(e), particulate emissions from Boiler #2, which began operation before September 21, 1983 and after June 8, 1972, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

D.5.3 Particulate Matter (PM) [326 IAC 6-2-4]

Boilers #3 was existing and in operation after September 12,1983 and the total heat capacities input from the entire source is less than 10 MMBtu/hr. Pursuant to 326 IAC 6-2-4(a), particulate emissions from Boilers #3 shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

(b) Other emission units, not regulated by a NESHAP, with PM10 and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) batch reaction tank, identified as Tank 111, producing nickel acetate at a maximum rate of 375 lbs/hr, and exhausting through stack/vent ID #1.

(2) One (1) batch reaction tank, identified as Tank 70, producing nickel sulfamate at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #2.

(3) One (1) batch reaction tank, identified as Tank 18, producing nickel bromide at a maximum rate of 1,800 lbs/hr, and exhausting through stack/vent ID #3.

(4) One (1) batch reaction tank, identified as Tank 4, producing cuprous chloride at a maximum rate of 7,000 lbs/hr, and exhausting through stack/vent ID #4.

(5) One (1) batch reaction tank, identified as Tank 14, producing cuprous cyanide at a maximum rate of 750 lbs/hr, and exhausting through stack/vent ID #5.

(6) One (1) batch reaction tank, identified as Tank 31, producing sodium zinc cyanide at a maximum rate of 5,000 lbs/hr, and exhausting through stack/vent ID #6.

(7) One (1) batch reaction tank, identified as Tank 7, producing sodium copper cyanide at a maximum rate of 16,500 lbs/hr, and exhausting through stack/vent ID #7.

(8) One (1) batch reaction tank, identified as Tank 12, producing sodium cyanide at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #12.

(9) One (1) batch reaction tank, identified as Tank 13, producing wet nickel sulfate crystal at a maximum rate of 700 lbs/hr, and exhausting through stack/vent ID #13.

(10) Twenty-seven (27) miscellaneous storage tanks, storing non-volatile, non-hazardous liquids and powders.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Visible Emissions [326 IAC 2-8]

Pursuant to FESOP 151-7295-00047, issued on June 17, 1997, the visible emissions from the batch reaction tanks included in the chemical process plant shall not exceed zero percent opacity.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Univertical Corporation and Univertical Chemical Corporation
Source Address: 203 Weatherhead Street, Angola, Indiana 46703
Mailing Address: 203 Weatherhead Street, Angola, Indiana 46703
FESOP No.: F151-15240-00047

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Univertical Corporation and Univertical Chemical Corporation
Source Address: 203 Weatherhead Street, Angola, Indiana 46703
Mailing Address: 203 Weatherhead Street, Angola, Indiana 46703
FESOP No.: F151-15240-00047

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: ______________________________

Title/Position: ______________________________

Date: ______________________________

Phone: ______________________________

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Univertical Corporation and Univertical Chemical Corporation
Source Location:	230 Weatherhead Street, Angola, Indiana 46703
County:	Steuben
SIC Code:	3351 and 2819
Operation Permit No.:	F151-15240-00047
Permit Reviewer:	ERG/YC

On May 15, 2002, the Office of Air Quality (OAQ) had a notice published in the Herald Republican in Angola, Indiana, stating that Univertical Corporation and Univertical Chemical Corporation had applied for a FESOP renewal relating to the operation of a copper, tin, and solder die casting and chemical reaction process plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The table of contents has been revised as appropriate.

The IDEM, OAQ has corrected the FESOP permit number in Section D.1.1 (b) and (c) from 15240 to 7295. Condition D.1.1 has been revised as follows:

D.1.1 FESOP Limit [326 IAC 2-8]

(a) Pursuant to FESOP 151-7295-00047, issued on June 17, 1997, and 326 IAC 2-8, the PM10 emissions from the copper bar finishing line shall not exceed 5.38 pounds per hour. This limit is equivalent to 23.6 tons per year.

(b) Pursuant to FESOP 151-~~15240~~**7295**-00047, issued on June 17, 1997 and 326 IAC 2-8, the PM10 emissions from the copper anode process line shall not exceed 0.2 pounds per hour. This limit is equivalent to 0.88 tons per year.

(c) Pursuant to FESOP 151-~~15240~~**7295**-00047, issued on June 17, 1997 and 326 IAC 2-8, the PM10 emissions from the die casting process line shall not exceed 0.05 pounds per hour. This limit is equivalent to 0.22 tons per year.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Univertical Corporation and Univertical Chemical Corporation
Source Location:	230 Weatherhead Street, Angola, Indiana 46703
County:	Steuben
SIC Code:	3351 and 2819
Operation Permit No.:	F151-15240-00047
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Univertical Corporation and Univertical Chemical Corporation relating to the operation of a copper, tin, and solder die casting and chemical reaction process plant. Univertical Corporation and Univertical Chemical Corporation was issued FESOP 151-7295-00047 on June 17, 1997.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) copper bar finishing line, with a maximum process rate of 3,000 pounds of copper bars per hour, including the following:

(1) One (1) Wheelabrator abrasive blasting machine (Shotblast), with a maximum process rate of 2,000 pounds of copper shot per hour, controlled by a baghouse, and exhausting through stack #DC-1.

(2) One natural gas-fired washing machine, identified as Washer #1, with a maximum capacity of 3,000 pounds per hour of copper bars and maximum heat input capacity of 0.6 MMBtu/hr, using a nontoxic alkaline soap, and exhausting through stack #BW-1;

(3) One (1) cold cut-off saw, identified as Saw #2, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation; and

(4) One (1) end drill and tap machine, identified as EDT, with a maximum capacity of 3,000 pounds per hour of copper bars, and exhausting to building ventilation.

(b) One (1) copper anode process line, with a maximum capacity of 4,000 pounds of pure copper per hour, including the following:

(1) One (1) natural gas-fired shaft melter furnace, identified as Melter #1, with a maximum capacity of 4000 lbs/hr of pure copper and maximum heat input of 8 MMBtu/hr, and exhausting through stack #SM1.

(2) One (1) natural gas-fired tumbler, identified as Tumbler #1, with a maximum capacity of 4,000 lbs/hr of pure copper and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) electric induction reheat furnace (Reheat), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(4) One (1) electric induction holding furnace (Holder), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(5) One (1) three inch billet continuous casting machine (Caster), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(6) One (1) cold cut-off saw, identified as Saw #1, with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(7) One (1) continuous rolling machine (Roller), with a maximum capacity of 4,000 lbs/hr of pure copper, and exhausting to building ventilation.

(c) One (1) die casting process line, with a maximum capacity of 1,000 lbs/hr of pure tin or solder, containing the following equipment:

(1) One (1) natural gas-fired melting pot furnace (Tin Pot), with a maximum capacity of 500 lbs/hr of pure tin and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(2) One natural gas-fired melting pot furnace (Solder Pot), with a maximum capacity of 500 lbs/hr of pure solder and maximum heat input of 0.35 MMBtu/hr, and exhausting to building ventilation.

(3) One (1) natural gas fired die casting machine, identified as DC #1, with a maximum capacity of 500 lbs/hr of pure solder or tin and maximum heat input of 0.475 MMBtu/hr, and exhausting to building ventilation.

(4) Two (2) natural gas-fired die casting machines, identified as DC #2 and DC #3, each with a maximum capacity of 500 lbs/hr of pure solder or tin and a maximum heat input of 0.2 MMBtu/hr, and exhausting to building ventilation.

(d) One (1) nickel sulfate dryer equipped with a cyclone, with a maximum input capacity of 3,050 lbs/hr of wet nickel sulfate crystal and a maximum heat input of 0.1 MMBtu/hr, using a scrubber as control, and exhausting through stack #10.

(e) One (1) sodium cyanide granulator, with a maximum capacity of 4,000 lbs/hr of sodium cyanide brick, using a water spray scrubber as control, and exhausting through stack #9.

(f) One (1) hydrochloric acid storage tank, identified as Tank 11, with a maximum capacity of 7,200 gallons and a maximum throughput rate of 160 lbs/hr or 67.5 gal/hr of hydrochloride acid, using an acid scrubber as control, and exhausting through stack/vent ID #11.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

There are no new emission units or pollution control equipment being added during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

(1) One (1) natural gas-fired boiler, identified as Boiler #1, constructed in 1946, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(2) One (1) natural gas-fired boiler, identified as Boiler #2, constructed in 1979, with a maximum heat capacity of 4.2 MMBtu/hr, and exhausting through stack #B1.

(3) One (1) natural gas-fired boiler, identified as Boiler #3, constructed in 1999, with a maximum heat capacity of 1.1 MMBtu/hr, and exhausting through stack #8.

(b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons:

(1) One (1) diesel fuel storage tank, with a maximum capacity of 550 gallons and maximum annual throughput of 100 gallons, exhausting through a tank vent.

(2) One (1) gasoline storage tank, with a maximum capacity of 500 gallons and maximum annual throughput of 2000 gallons, exhausting through a tank vent.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(d) Other emission units, not regulated by a NESHAP, with PM_{10} and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) batch reaction tank, identified as Tank 111, producing nickel acetate at a maximum rate of 375 lbs/hr, and exhausting through stack/vent ID #1.

(2) One (1) batch reaction tank, identified as Tank 70, producing nickel sulfamate at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #2.

(3) One (1) batch reaction tank, identified as Tank 18, producing nickel bromide at a maximum rate of 1,800 lbs/hr, and exhausting through stack/vent ID #3.

(4) One (1) batch reaction tank, identified as Tank 4, producing cuprous chloride at a maximum rate of 7,000 lbs/hr, and exhausting through stack/vent ID #4.

(5) One (1) batch reaction tank, identified as Tank 14, producing cuprous cyanide at a maximum rate of 750 lbs/hr, and exhausting through stack/vent ID #5.

(6) One (1) batch reaction tank, identified as Tank 31, producing sodium zinc cyanide at a maximum rate of 5,000 lbs/hr, and exhausting through stack/vent ID #6.

(7) One (1) batch reaction tank, identified as Tank 7, producing sodium copper cyanide at a maximum rate of 16,500 lbs/hr, and exhausting through stack/vent ID #7.

(8) One (1) batch reaction tank, identified as Tank 12, producing sodium cyanide at a maximum rate of 100 lbs/hr, and exhausting through stack/vent ID #12.

(9) One (1) batch reaction tank, identified as Tank 13, producing wet nickel sulfate crystal at a maximum rate of 700 lbs/hr, and exhausting through stack/vent ID #13.

(10) Twenty-seven (27) miscellaneous storage tanks, storing non-volatile, non-hazardous liquids and powders.

Existing Approvals

(a) FESOP 151-7295-00047, issued on June 17, 1997;

(b) Administrative Amendment (151-8785-00047), issued on July 31, 1997; and

(c) Minor Permit Modification (151-8853-00047), issued on October 28, 1997.

All conditions from previous approvals were incorporated into this FESOP without changes, except the following:

(a) FESOP 151-7295-00047, issued on June 17, 1997:

Conditions D.1.1, D.1.2 and D.1.3 were the emission limits, compliance determination requirements, and record keeping and reporting requirements for one (1) natural gas multi-chambered industrial/commercial incinerator.

Changes to original condition:

Based on the letter received on March 12, 2002, the Permittee indicated that this incinerator has not been installed yet and there is no time frame for the installation of this unit. Since this source did not install the incinerator within 18 months of issuance FESOP 151-7295-00047, issued on June 17, 1997, this incinerator and associated conditions have been removed from this FESOP.

(b) FESOP 151-7295-00047, issued on June 17, 1997:

Condition D.8.1: Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the hydrochloric acid tank shall not exceed 0.38 pounds per hour when operation at a process weight rate of 160 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Changes to original condition:

Based on the equation in 326 IAC 6-3, the allowable PM emission rate, when operating at a process weight rate of 160 pounds per hour, should be 0.75 pounds per hour, instead of 0.38 pounds per hour. Therefore, the PM limit for the hydrochloric acid tank has been corrected to 0.75 pounds per hour in this FESOP.

(c) FESOP 151-7295-00047, issued on January 17, 2997.

Condition D.8.4 required the source to perform daily visible emissions notations of the hydrochloric acid tank stack.

Conditions D.8.5 and D.8.6(b) required the source to monitor and record the pressure drop, flow rate, and the hydrochloric acid concentration in the scrubbing liquid for the acid scrubber equipped with the hydrochloric acid tank (Tank 11).

Changes to original conditions:

Emission calculations for this hydrochloric acid tank (Tank 11) has been updated (see Appendix A) based on the additional information submitted by the source. The updated emission calculations indicate that the potential hydrochloric acid emissions from this tank is 1.42 tons per year, which is less than 25 tons per year. Therefore, the requirements of visible emission notations has been removed from this FESOP.

This hydrochloric acid tank without the control of the scrubber is still in compliance with the current PM, HAPs, and FESOP limits associated with this unit. Therefore, the monitoring and record keeping requirements for the acid scrubber are not necessary and conditions D.8.5 and D.8.6(b) in the FESOP 151-7295-00047 have been removed from this FESOP. However, the source is required to do the record keeping on the annual throughput rate of this tank.

(d) FESOP 151-7295-00047, issued on January 17, 2997.

Conditions D.3.4, D.7.4 and D.8.4 required visible emission notations of the exhaust stacks be taken daily.

Changes to original conditions:

In accordance with IDEM policy, the frequency of the visible emission notations has been changed from ‘daily’ to ‘once per shift’.

(e) FESOP 151-7295-00047, issued on June 17, 1997.

Condition D.3.5 required parametric monitoring be conducted on a daily basis.

Changes to original condition:

In accordance with IDEM policy, the frequency of parametric monitoring has been changed from ‘daily’ to ‘once per shift’.

(f) FESOP 151-7295-00047, issued June 17, 1997:

Condition A.3 (Insignificant Activities) listed the sodium cyanide granulator as an insignificant emission unit.

Changes made to original conditions:

Based on the emission calculations provided in Appendix A, the potential sodium cyanide emissions from the sodium cyanide granulator are greater than one (1) ton per year. Therefore, this granulator is considered as a significant emission unit.

Air Pollution Control Justification as an Integral Part of the Process

As part of their FESOP application submitted in 1997, the company has submitted the following justification such that the cyclone equipped with the Nickel Sulfate dryer be considered as an integral part of the Nickel Sulfate drying process:

(a) The cyclone is positioned above the dryer to act as a collection device and final drying step for the nickel sulfate. An additional scrubber is installed with the Nickel Sulfate dryer as the PM control device.

During the review of FESOP 151-7295-00047, issued on June 17, 1997, IDEM, OAQ evaluated this justification and agreed that this cyclone is considered as an integral part of the Nickel Sulfate dryer. Therefore, the permitting level was determined using the potential to emit after the cyclone and the same justification has been applied to this FESOP. Operating conditions in the proposed permit will specify that this cyclone shall operate at all times when the Nickel Sulfate dryer is in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on January 17, 2002. Additional information was received on March 8, 2002 and March 12, 2002.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 9).

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	132.4
PM-10	120.0
SO_2	0.04
VOC	1.5
CO	7.2
NO_x	8.5

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Unrestricted Potential Emissions (tons/yr)
Nickel Compounds	39.4
Cyanide Compounds	1.8
Hydrochloric Acid	1.4
TOTAL	43.6

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of particulate matter (PM) are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) Pursuant to 326 IAC 2-8, this source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforcement limits that restrict PTE to below Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operation Permit (FESOP).

(d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The source, issued a FESOP on June 17, 1997, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP. (F151-7295-00047; issued on June 17, 1997).

	Potential to Emit After Issuance (tons/year)						
Process/emission unit	PM	PM_{10}	SO_2	VOC	CO	NO_X	HAPs
Copper Bar Finishing Line	Less than 23.6	Less than 23.6	Negligible	Negligible	Negligible	Negligible	Negligible
Copper Anode Line	0.67	0.67	0.02	0.20	3.09	3.68	Negligible
Die Casting Line	0.21	0.21	Negligible	0.04	0.58	0.69	Negligible
Nickel Sulfate Dryer	Less than 9.0	Less than 9.0	Negligible	Negligible	Negligible	Negligible	Less than 9.0
Sodium Cyanide Granulator	1.75	1.75	—	—	—	—	1.75
Hydrochloric Acid Tank	1.42	1.42	—	—	—	—	1.42
Boilers (Insignificant)	0.32	0.32	0.02	0.23	3.50	4.16	Negligible
*Storage Tanks (Insignificant)	—	—	—	Less than 0.16	—	—	Negligible
*Welding Operation (Insignificant)	0.43	0.43	—	—	—	—	Negligible
Batch Reaction Tanks (Insignificant)	Negligible	Negligible	—	Negligible	—	—	Negligible
Total PTE After Issuance	Less than 38.0	Less than 38.0	0.04	1.5	7.2	8.5	Less than 10 for a single HAP and 25 for combined HAPs

*Potential to emit of the storage tanks and the welding operations is from the Technical Support Document (TSD) for FESOP 151-7295-00047, issued on June 17, 1997.

County Attainment Status

The source is located in Steuben County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Steuben County has been designated as attainment or unclassifiable for ozone.

(b) Steuben County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The hydrochloric acid storage tank (Tank 11), as well as other miscellaneous storage tanks have capacities less than 10,000 gallons or store non-organic liquid. Therefore, the New Source Performance Standards for Volatile organic liquid Storage Vessels (40 CFR Part 60.11ob - 60.117b, Subpart Kb) do not apply to these tanks.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

(d) The source does not perform any hydrochloric acid regeneration process and the hydrochloric acid is used for pH adjustment for the chemical reactions. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Steel Pickling - HCl Process Facilities and Hydrochloric Acid Generation Plants (40 CFR Part 63, Subpart CCC) do not apply to this source.

State Rule Applicability - Entire Source

326 IAC 2-8-4 (FESOP)

Pursuant to 326 IAC 2-8-4, the PM10 emissions shall be limited to less than 100 tons per tons per year. The HAPs emissions from the entire source shall be limited to less than 10 tons per year for a single HAP and less than 25 tons per year for any combination of HAPs. Therefore, the requirements of 326 IAC 2-7 do not apply.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The source is not 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and has the potential to emit of any regulated pollutant after controls less than two hundred and fifty (250) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 do not apply.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The source was constructed prior to July 27, 1997 and has elected to limit their HAP emissions from the entire source to less than the major source thresholds. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Steuben County and the potential to emit all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - The Copper Bar Finishing Line

326 IAC 6-3-2 (Process Operations)

The allowable particulate matter (PM) emission rate from the copper bar finishing line shall be limited to 5.38 lbs/hr when the process weight rate is 3,000 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The stack test performed on September 16, 1999 shows an averaged PM emission rate of 0.109 lbs/hr after control of a baghouse at 99.5% efficiency and demonstrates that the copper bar finishing line is in compliance with this limit.

326 IAC 2-8 (FESOP)

Pursuant to 326 IAC 2-8 (FESOP), the PM10 emissions from the copper bar finishing line shall be limit to 5.38 lbs/hr, which is equivalent to 23.6 tons per year. Combined with the PM10 limits for the nickel sulfate dryer, the sodium cyanide granulator, the hydrochloric acid tank, and the insignificant units, the PM10 emissions from the entire source will be limited to less than 100 tons per year. Therefore, 327 IAC 2-7 does not apply.

State Rule Applicability - Copper Anode Process and Die Casting Process Lines

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) emission rates from the copper anode process line and the die casting process line shall be limited to the pounds per hour limitations calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Based on the equation above, the corresponding PM limits for these processes are as follows:

Process	Process Weight Rate (lbs/hr)	PM Limit (lbs/hr)
Copper anode process line	4,000	6.52
Die casting process line	1,000	2.58

However, the PM emissions from these process lines were limited in the current FESOP to the following values:

Process	PM Limit (lbs/hr) in FESOP 151-7295-00047
Copper anode process line	0.2
Die casting process line	0.05

Based on the emission calculations provided in Appendix A, the potential to emit PM from the copper anode process line and die casting process line is 0.15 lbs/hr and 0.048 lb/hr, respectively. Therefore, these processes are in compliance with 326 IAC 6-3-2 and the FESOP limits.

State Rule Applicability - The Nickel Sulfate Dryer

326 IAC 6-3-2 (Process Operations)

The allowable particulate matter (PM) emission rate from the nickel sulfate dryer shall be limited to 5.44 lbs/hr when the process weight rate is 3,050 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

According to the emission calculations (see Appendix A), the potential to emit PM from the nickel sulfate dryer (with a control of a scrubber at 99% efficiency) is 0.39 lbs/hr. Therefore, the PM emissions from the nickel sulfate dryer is in compliance with 326 IAC 6-3-2.

326 IAC 2-8 (FESOP)

(a) The particulate matter emissions from this process consist of nickel sulfate particles, which are also considered as a hazardous air pollutant. Pursuant to 326 IAC 2-8 (FESOP), emissions of a single HAP should be limited to less than 10 tons per year. Therefore, PM emissions were limited to 2.05 lbs/hr, which is equivalent to 9.0 tons/yr, in the current FESOP (151-7295-00047, issued on June 17, 1997). The same limit has been included in this proposed permit.

(b) Pursuant to 326 IAC 2-8 (FESOP), the PM10 emissions from the nickel sulfate dryer shall be limit to 2.05 lbs/hr, which is equivalent to 9.0 tons per year. Combined with the PM10 limits for the copper bar finishing line, the sodium cyanide granulator, the hydrochloric acid tank, and the insignificant units, the PM10 emissions from the entire source will be limited to less than 100 tons per year. Therefore, 327 IAC 2-7 does not apply.

State Rule Applicability - The Sodium Cyanide Granulator

326 IAC 6-3-2 (Process Operations)

The allowable particulate matter (PM) emission rate from the sodium cyanide granulator shall be limited to 6.52 lbs/hr when the process weight rate is 4,000 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

According to the emission calculations (see Appendix A) , the potential to emit PM from the granulator without control is 0.4 lbs/hr. Therefore, the sodium cyanide granulator is in compliance with the 326 IAC 6-3-2 .

326 IAC 2-8 (FESOP)

(a) The PM emissions from this process consist of sodium cyanide particles, which are also considered as a hazardous air pollutant. Pursuant to 326 IAC 2-8 (FESOP), emissions of a single HAP should be limited to less than 10 tons per year. Therefore, PM emissions were limited to 0.4 lbs/hr, which is equivalent to the potential emission from this process line, in the current FESOP (151-7295-00047, issued on June 17, 1997). The same limit has been included in this proposed permit. The limit of 0.4 lbs/hr is equivalent to 1.75 tons/yr.

(b) Pursuant to 326 IAC 2-8 (FESOP), the PM10 emissions from the sodium cyanide granulator shall be limit to 0.4 lbs/hr, which is equivalent to 1.75 tons per year. Combined with the PM10 limits for the copper bar finishing line, the nickel sulfate dryer, the hydrochloric acid tank, and the insignificant units, the PM10 emissions from the entire source will be limited to less than 100 tons per year.

Therefore, 327 IAC 2-7 does not apply.

State Rule Applicability - Hydrochloric Acid Tank

326 IAC 6-3-2 (Process Operations)

The allowable particulate matter (PM) emission rate from the hydrochloric acid tank shall be limited to 0.75 lbs/hr when the process weight rate is 160 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

According to the emission calculations (see Appendix A), the potential to emit PM from the hydrochloric acid tank without control is 0.33 lbs/hr. Therefore, the hydrochloric acid tank is in compliance with 326 IAC 6-3-2.

326 IAC 2-8 (FESOP)

(a) Pursuant to 326 IAC 2-8 (FESOP), the PM10 emissions from the hydrochloric acid tank shall be limit to 0.33 lbs/hr, which is equal to the potential emissions from this tank without control and is equivalent to 1.42 tons per year. Combined with the PM10 limits for the copper bar finishing line, the nickel sulfate dryer, the sodium cyanide granulator, and the insignificant units, the PM10 emission from the entire source will be limited to less than 100 tons per year.

(b) The hydrochloric acid is the only pollutant emitted from this tank and is also considered as a hazardous air pollutant. The potential hydrochloric acid emissions from this tank shall be limited to 3.3 lbs/hr. Which is equivalent to 1.42 tons per year. The potential emissions are computed based a maximum throughput rate of 590,000 gallons per year. Any change or modification which may increase the potential emissions of hydrochloric acid to 10 tons per year or more must be approved by the Office of Air Quality before any such change may occur.

Therefore, 326 IAC 2-7 does not apply.

State Rule Applicability - Insignificant Activities

326 IAC 6-2-3(d) (PM Emissions for Sources of Indirect Heating)

Boiler #1 was existing and in operation before June 8, 1972, therefore, the PM emissions from boiler #1 shall be limit to 0.8 lbs per MMBtu pursuant to 326 IAC 6-2-3(d).

326 IAC 6-2-3(e) (PM Emissions for Sources of Indirect Heating)

Boiler #2, which was existing and in operation before September 21, 1983 and after June 8, 1972, has a heat input capacity less than 250 MMBtu/hr. Therefore, the PM emissions from boiler #2 shall be limit to 0.6 lbs per MMBtu pursuant to 326 IAC 6-2-3(e).

326 IAC 6-2-4 (PM Emissions for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4(a), indirect heating facilities constructed after September 12, 1983, shall be limited by the following equation or by 0.6 lbs per MMBtu, whichever is more stringent:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where

Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

For boiler #3, which was installed in 1999, the allowable emission rate limit established from the equation above equals:

$$Pt = \frac{1.09}{(4.2 + 4.2 + 1.1)^{0.26}} = 0.61 \text{ lbs/MMBtu}$$

Therefore, the most stringent PM emission limit for boiler #3 is 0.6 lbs/MMBtu.

326 8-4-3 (Petroleum Liquid Storage Facilities)

The gasoline and diesel storage tanks have capacities less than 39,000 gallons. Therefore, 326 IAC 8-4-3 does not apply to these tanks.

326 IAC 2-8-4 (FESOP)

Pursuant to FESOP 151-7295-00047, issued on June 17, 1997, and 326 IAC 2-8, the visible emissions from the batch reaction tanks included in the chemical process plant shall not exceed zero percent opacity.

Testing Requirements

Stack testing was required for the blasting machine in FESOP 151-7295-00047, issued on June 17, 1997. A stack test of the blasting machine was conducted on September 16, 1999, and the result showed that the blasting machine was in compliance with the current permit conditions.

In order to demonstrate continued compliance with the applicable emission limitations , the source shall perform stack tests on the abrasive blasting machine within five (5) years from the date of the last valid compliance demonstration.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill

the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The following new compliance requirements were incorporated into this FESOP:

1. The baghouse equipped with the abrasive blasting machine has the additional applicable compliance monitoring conditions as specified below:

    (a) An inspection shall be performed each calender quarter of all bags controlling the blasting machine when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced. In the event that bag failure has been observed:

        (1) for multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit.

        (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit.

    Theses conditions are necessary because the baghouse for the abrasive blasting machine must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

2. The scrubber equipped with the nickel sulfate dryer has the additional applicable compliance monitoring conditions as specified below:

(a) The Permittee shall record the acid content of the scrubber, at least once per shift when nickel sulfate dryer is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the acid content shall be maintained at a maximum pH level of 7, or an acid content level established during the latest stack test. The Compliance Response Plan for these processes shall contain troubleshooting contingency and response steps for when the pressure reading or the acid content is outside of the above mentioned range for any one reading.

(b) An inspection shall be performed each calendar quarter of the scrubber when venting to the atmosphere. A scrubber inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. In the event that a scrubber malfunction has been observed, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit.

Theses conditions are necessary because the scrubber for the nickel sulfate dryer must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

All compliance requirements from previous approvals were incorporated into this FESOP. The source is subject to the following compliance monitoring requirements:

1. The abrasive blasting machine has applicable compliance monitoring conditions as specified below:

(a) Visible emissions notations of the blasting machine stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(b) The Permittee shall record the total static pressure drop across the baghouse controlling the abrasive blasting machine, at least once per shift when the blasting machine is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

These monitoring conditions are necessary because the baghouse for the abrasive blasting machine must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

2. The nickel sulfate dryer has applicable compliance monitoring conditions as specified below:

   (a) Visible emissions notations of the dryer stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

   (b) The Permittee shall record the total static pressure drop, and the scrubbing liquid flow rate, and the acid content of the scrubber at least once per shift when the dryer is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 0.5 to 2.0 inches of water, the scrubbing liquid flow rate shall be maintained at a minimum of 5.0 gallons per minute, or ranges established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading or the scrubbing liquid flow rate is outside of the above mentioned range for any one reading.

   These monitoring conditions are necessary because the scrubber for the nickel sulfate dryer must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Conclusion

The operation of this copper, tin, solder die casting and chemical reaction process plant shall be subject to the conditions of the attached proposed (FESOP No.: F151-15240-00047).

Appendix A: Emission Calculations
Emissions from the Copper Finishing Process Line

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: March 6, 2002

#Emissions from the copper finishing process line are mainly from the abrasive blasting machine.

1. Potential emissions from the abrasive blasting machine:

Blast Rate
lbs/hr
2000.0

	Pollutant					
	PM	PM10	SO2	NO_x	VOC	CO
Emission Factor (lb/ton)	0.01 (lbs PM / lbs Blast)	0.86 (lbs PM10 / lbs PM)	NA	NA	NA	NA
Potential Emission (lbs/hr)	20.00	17.20	-	-	-	-
Potential Emission (tons/yr)	87.60	75.34	-	-	-	-

Methodology
Emission Factors are adapted from Air Quality permits by STAPPA ALOPCO, Section 3 for Abrasive Blasting

Potential PM (tons/yr) = Blast Rate (lbs/hr) x PM Emission Factor (lbs/lb) x 8760 hr/yr x 1 ton/ 2000 lb
Potential PM10 (tons/yr) = Potential PM Emissions (tons/yr) x PM10 Emission Factor

2. Potential to emit from the abrasive blasting machine (after control):

Control Device: Baghouse
Control Efficiency: 99.50%

PTE of PM =
20 lbs/hr x (1-99.5%) = **0.1 lbs/hr**
= 0.1 lbs/hr x 8760 hr/yr x 1 tons/2000 lbs = **0.44 tons/yr**

PTE of PM10 =
17.2 lbs/hr x (1-99.5%) = **0.09 lbs/hr**
= 0.09 lbs/hr x 8760 hr/yr x 1 tons/2000 lbs = **0.38 tons/yr**

Appendix A: Emission Calculations
Emissions from the Copper Anode Process Line

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

1. From Shaft Melter:

Copper input lbs/hr	Potential Throughput tons/yr
4000.0	17520.0

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor (lbs/ton)	0.03	0.03	NA	NA	NA	NA
Potential Emission (tons/yr)	0.26	0.26	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology
Emission Factors are adapted from FIRE Version 6.23, SCC 3-04-004-26 (Lead Melting), which is the only available emission factor for metal melting process in FIRE.
Emission (tons/yr) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 lbs/2000ton

2. From Shaft Melter Combustion (8.0 MMBtu/hr) and Tumbler Combustion (0.4 MMBtu/hr)

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
8.4	73.6

	Pollutant					
	PM*	PM10*	SO2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100	5.5	84.0
Potential Emission in tons/yr	0.28	0.28	2.2E-02	3.68	0.20	3.09

*PM and PM10 emission factors are condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

3. From Continuous Casting:

Copper Input lbs/hr	Potential Throughput tons/yr
4000.0	17520.0

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor (lb/ton)	0.015	0.015	NA	NA	NA	NA
Potential Emission in tons/yr	0.13	0.13	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology
Emission Factors are adapted from FIRE Version 6.23, SCC 3-04-004-39 (Copper Casting Operation)
Emission (tons/yr) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 lbs/2000ton

4. Total Emissions from the Copper Anode Process Line:

Pollutant	PM	PM10	SO2	NO_x	VOC	CO
Total Potential Emission (tons/yr)	**0.67**	**0.67**	**0.02**	**3.68**	**0.20**	**3.09**

Appendix A: Emission Calculations
Emissions from the Die Casting Process Line

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

1. From Tin Melting Pot Furnace:

Tin input tons/hr	Potential Throughput tons/yr
0.25	2190.0

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor (lbs/ton)	0.03	0.03	NA	NA	NA	NA
Potential Emission (tons/yr)	0.03	0.03	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology
Emission Factors are from AP-42, Tables 12.11-2, SCC #3-04-004-26 (kettle refining for lead, AP-42, 01/95)
, which is the only available emission factor for melting of refined (pure) metal process in AP-42.
Emission (tons/yr) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 lbs/2000ton

2. From Solder Melting Pot Furnace:

Solder Input tons/hr	Potential Throughput tons/yr
0.25	2190.0

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor (lbs/ton)	0.03	0.03	NA	NA	NA	NA
Potential Emission (tons/yr)	0.03	0.03	-	-	-	-

* Assume all the PM emissions are PM10 emissions.

Methodology
Emission Factors are from AP-42, Tables 12.11-2, SCC #3-04-004-26 (kettle refining for lead, AP-42, 01/95)
, which is the only available emission factor for melting of refined (pure) metal process in AP-42.
Emission (tons/yr) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 lbs/2000ton

3. From Die Casting :

**Tin or Solder Input tons/hr	Potential Throughput tons/yr
0.5	4380.0

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor (lbs/ton)	0.04	0.04	NA	NA	NA	NA
Potential Emission (tons/yr)	0.09	0.09	-	-	-	-

* Assume all the PM emissions are PM10 emissions.
** The die casting process is botttlenecked by the tin and solder melting processes which have a combined throughput of 0.5 tons/hr.

Methodology
Emission Factors are from AP-42, Tables 12.11-2, SCC #3-04-004-09 (lead casting, AP-42, 01/95)
These emission factors were used due to a lack of emission factors for tin or solder casting.
Emission (tons/yr) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 lbs/2000ton

Appendix A: Emission Calculations
Emissions from the Die Casting Process Line (continued)

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

4. From Natural Gas Combustion:

(a) Time Melting Pot Furnace (0.35 MMBtu/hr)
(b) Solder Melting Pot Furnace (0.35 MMBtu/hr)
(c) Die Casting Combustion (0.875 MMBtu/hr)

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.575	13.8

	Pollutant					
	PM*	PM10*	SO2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100	5.5	84.0
Potential Emission in tons/yr	0.05	0.05	4.1E-03	0.69	0.04	0.58

*PM and PM10 emission factors are condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

5. Total Emissions from the Die Casting Process Line:

Pollutant	PM	PM10	SO2	NO_x	VOC	CO
Total Potential Emission (tons/yr)	**0.21**	**0.21**	**4.1E-03**	**0.69**	**0.04**	**0.58**

Appendix A: Emission Calculations
Emissions from the Nickel Sulfate Drying Process

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

1. Emissions from the dryer (according to the mass balance of this process):

Wet Nickel Sulfate Input: 3050 lbs/hr
Evaporated Water: 50 lbs/hr
*PM % passes the cyclone: 0.30% **(the cyclone acts as a collection device, therefore, is integral to the process)**
Scrubber Control Efficiency: 99%

Potential PM/PM10 Emissions (lbs/hr) = 3050 lbs/hr - 50 lbs/hr x 0.3% = 9.00 lbs/hr
Potential PM/PM10 Emissions (tons/yr) = 9 lbs/hr x 8760 hr/yr x 1 tons/2000 lbs = 39.42 tons/yr

Potential to Emit (after control):
PM/PM10 (lbs/hr) = 9 lbs/hr x (1-99%) = 0.09 lbs/hr
PM/PM10 (tons/yr) = 39.42 tons/yr x (1-99%)= 0.39 tons/yr

* Assume all the PM emissions equal to PM10 emissions, and Nickel sulfate is also considered as a hazardous air pollutant.

2. From the combustion

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.1	0.9

	Pollutant					
	PM*	PM10*	SO2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100	5.5	84.0
Potential Emission in tons/yr	3.3E-03	3.3E-03	2.6E-04	0.04	2.4E-03	0.04

*PM and PM10 emission factors are condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

3. Total Emissions from the Nickel Sulfate Drying Process:

Pollutant	PM	PM10	SO2	NO_x	VOC	CO
Total Potential Emission (tons/yr)	**39.42**	**39.42**	**2.6E-04**	**0.04**	**2.4E-03**	**0.04**
Total Potential to Emit (tons/yr)	**0.39**	**0.39**	**2.6E-04**	**0.04**	**2.4E-03**	**0.04**

Pollutant	Nickel Sulfate
Total Potential Emission (tons/yr)	**39.42**
Total Potential to Emit (tons/yr)	**0.39**

Appendix A: Emission Calculations

PM and HAPs from the Sodium Cyanide Granulator

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

1. Process Description:

Sodium Cyanide Input:	**4000**	**lbs/hr**
***PM % Enter the Scrubber:**	**0.01%**	**(**according to a mass balance analysis of this process)**
Control Device:	**Scrubber**	
Control Efficiency:	**99%**	

* Assume all the PM emissions equal to PM10 emissions.

**The calculation is consistent with Univertical's past experience of packaging 99.99% of the sodium cyanide brick entering the granulator and the concentration of the solution formed in the scrubber.

2. Uncontrolled potential emissions from the granulator:

Potential PM Emissions (lbs/hr) = 4000 lbs/hr x 0.01% = **0.40 lbs/hr**

Potential PM Emissions (tons/yr) = 4000 lbs/hr x 8760 hr/yr x 0.01% x 1 ton/2000 lbs = **1.75 tons/yr**

Sodium Cyanide is considered to be a hazardous air pollutant, therefore,

Potential HAP Emissions (tons/yr) = Potential Sodium Cyanide Emissions = **1.75 tons/yr**

Appendix A: Emission Calculations
PM and HAP Emissions
From the Hydrochloric Acid Storage Tank (Tank11)

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: March 12, 2002

1. Process Descriptions:

Tank Capacity:	**7200**	**gal**
Throughput Rate:	**140,000**	**gal/yr**
Max Throughput:	**67.3**	**gal/hr (based on 8 hrs/day, 5 days/week operation)**
Max Throughput:	**590,000**	**gal/yr**
Control Device:	**Acid Scrubber**	
Control Efficiency:	**90%**	

Note:
The operation of the acid scrubber is not a federally enforceable condition, since there is no monitoring requirement associated with this control device.

2. Uncontrolled Potential Emissions

This will be a closed tank vented only during loading operation. The exhaust will be directed to an acid scrubber.
The hydrochloric acid will be emitted as a mist. Therefore, the OAQ considers this to be particulate matter emissions as well as HAP emissions.
According to AP-42, Chapter 5.2, emission factor for splash loading of volatile liquids can be estimated using the following equation:

$$L = \frac{12.46 \times S \times P \times M}{T}$$

Where
L = loading loss emission factor (lbs/kgal of liquid loaded)
S = saturation factor = 1.45 for splash loading with dedicated normal service
P = true vapor pressure of liquid loaded = 3.87 psia
M = molecular weight of vapors = 36.5 lb/lb-mole
T = temperature of bulk liquid loaded = 528 degrees Rankine

Therefore

$$L = \frac{12.46 \times 1.45 \times 3.87 \times 36.5}{528} =$$ 4.83 lbs/ kgal of liquid loaded

Potential PM/PM10 Emissions:

= 67.3 gal/hr x 1 kgal/1000 gal x 4.83 lbs/kgal = **0.33 lbs/hr**
= 67.3 gal/hr x 1 kgal/1000 gal x 4.83 lbs/kgal x 8760 hr/yr x 1 ton/2000 lb = **1.42 tons/yr**

(assume PM emissions equal to PM10 emissions)

Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From Insignificant Combustion Units

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: January 30, 2002

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
9.50	83.2

	Pollutant					
	PM*	PM10*	SO2	**NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100	5.5	84.0
Potential Emission in tons/yr	**0.32**	**0.32**	**0.02**	**4.16**	**0.23**	**3.50**

*PM and PM10 emission factors are condensable and filterable PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology

All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Emissions from the Chemical Reaction Tanks (Insignificant Activities)

Company Name: Univertical Corporation and Univertical Chemical Corporation
Address City IN Zip: 203 Weatherhead Street, Angola, IN 46703
FESOP: 151-15240-00047
Reviewer: ERG/YC
Date: March 6, 2002

1. Tank # 111: Nickel Acetate Production

This reaction is performed with a stoichiometric excess of nickel oxide of about 65 lbs. The excess nickel oxide will be allowed to settle out of the solution so that Univertical can reuse it in the next batch. Since the tank is covered with only a vent to stabilize pressure, there are negligible emissions associated with this process.

2. Tank # 70: Nickel Sulfamate Production

This reaction is performed with a stoichiometric excess of nickel of about 700 lbs. The excess nickel will be allowed to settle out of the solution so that Univertical can reuse it in the next batch. Since the tank is covered with only a vent to stabilize pressure, there are negligible emissions associated with this process.

3. Tank # 18: Nickel Bromide Production

This reaction is performed with a stoichiometric excess of nickel oxide of about 425 lbs. The excess nickel oxide will be allowed to settle out of the solution so that Univertical can reuse it in the next batch. Since the tank is covered with only a vent to stabilize pressure, there are negligible emissions associated with this process.

4. Tank # 4: Cuprous Chloride Production

This reaction is performed with a stoichiometric excess of copper of about 4600 lbs so that the reaction will proceed. The hydrochloric acid that is added will completely react such that the remaining products are cuprous chloride, sodium chloride, and water. Since none of these compounds are hazardous air pollutants (HAPs) or volatile organic compounds (VOC), there are no emissions associated with this process.

5. Tank # 14: Cuprous Cyanide Production

The cuprous chloride product from tank #4 is transferred to the cuprous cyanide production tanks and mixed with sodium cyanide. Neither of these is added in excess, with the reaction going to completion. The products are cuprous cyanide and sodium chloride. Since the cuprous cyanide forms a flock and is centrifuged, the emissions associated with this process are negligible.

6. Tank # 31: Sodium Zinc Cyanide Production

According to the maximum production rates and mass balance given by Univertical, there will be no emissions associated with this process. This process is not a reaction but a mixture of solutions with input equaling output.

7. Tank # 7: Potassium/Sodium Copper Cyanide Production

According to the maximum production rates and mass balance given by Univertical, there will be no emissions associated with this process. This process is not a reaction but a mixture of solutions with input equaling output.

8. Tank # 12: Sodium Zinc Cyanide Production

According to the maximum production rates and mass balance given by Univertical, there will be no emissions associated with this process. This process is not a reaction but a mixture of solutions with input equaling output.

9. Tank # 13: Nickel Sulfate Wet Crystal Production

According to the maximum production rates and mass balance given by Univertical, there will be no emissions associated with this process. This process is not a reaction but a mixture of solutions with input equaling output.